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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,224	10/24/2003	Tong Shao	USP2286C-DRSH	2268

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EXAMINER

JOHNSON, CARLTON

ART UNIT	PAPER NUMBER
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2136

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/693,224	Applicant(s) SHAO, TONG	
	Examiner Carlton Johnson	Art Unit 2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responding to application papers filed **10-24-2003**.
2. Claims **1 - 13** are pending. Claims **1, 8** are independent.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims **1 - 13** are rejected under 35 U.S.C. 102(e) as being anticipated by **Heider et al.** (US Patent No. **5,276,863**).

Regarding Claim 1, Heider discloses an apparatus used to realize secured switch of computing system status, which includes:

- a) request unit, to request the computing system to switch from the present status to the previous status; (see Heider col. 5, lines 44-46; col. 16, lines 15-17: request/response (i.e. command) mechanism for switch; col. 13, lines 48-49: state switch capability)

- b) switch unit, to realize status switch of the stated computing system; (see Heider col. 5, lines 53-63; col. 13, lines 48-49: perform switch, from one state to another state)
- c) control unit, to ensure the status switch process absolutely uninterruptible; (see Heider col. 14, lines 15-17: non-maskable interrupt (i.e. NMI) to perform request (i.e. command) and
- d) the stated control unit responds to the requests from the request unit, (see Heider col. 5, lines 44-46: request processed) and controls the switch unit to switch from the present status to the previous status. (see Heider col. 14, lines 18-24; col. 14, lines 39-40: switch operation completed)

Regarding Claim 2, Heider discloses as to the apparatus stated in claim of Rights 1, the stated switch unit is an on-off switch, which is used to switch selectively between the present and previous status of the computing system as per commands from the control unit in order to change or resume all the present alterable status information of the computing system. (see Heider col. 17, line 63 - col. 18, line 4: command capability; col. 13, lines 48-49: switch (i.e. on-off, ON state, and console state) capability; col. 15, lines 64-67: save state information for resumption)

Regarding Claim 3, Heider discloses as to the apparatus stated in claim of Rights 1, the control unit further includes an ID verification unit to ensure that the switch unit can execute its operation only after the ID verification. (see Heider col. 14, lines 26-34:

authorization and authentication performed (i.e. ID verification), state switch only allowed if authorization succeeds)

Regarding Claim 4, Heider discloses as to the apparatus stated in claim of Rights 1-3, the control unit includes: memory, to store the control commands to complete status switch operations; monitoring unit, to ensure that the responses to status switch requests can be executed only by the control commands in the memory. Otherwise, the switch unit can not work. (see Heider col. 16, lines 44-48; col. 17, lines 13-16: software, programs to perform operational procedures of switching state; col. 17, lines 50-57; col. 17, lines 63-65: commands within user interface software, programs)

Regarding Claim 5, Heider discloses as to any one of the units stated in claim of Rights 4, the control unit further includes:

- a) set trigger, as the symbol to allow the switch unit to carry out its normal operations, and simultaneously sends out NMI to the CPU of the computing system; (see Heider col. 14, lines 15-17: non-maskable interrupt (i.e. NMI) utilized to process command(s))
- b) reset trigger, to reset the stated set trigger after switching in case of being misused by any other programs. (see Heider col. 14, lines 35-38: authorization fails, reset saved state (i.e. ON state, console state))

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Regarding Claim 6, Heider discloses as to the apparatus stated in claim of Rights 5, the control unit further includes an interrupt monitoring unit, which ensures that the stated non-maskable program can not be interrupted before finishing the reset of the stated reset trigger. (see Heider col. 14, lines 15-17: non-maskable interrupt (i.e. NMI) utilized during reset operation)

Regarding Claim 7, Heider discloses as to any one of the units stated in claim of Rights 1-3, the control unit includes:

- a) memory, to store the control commands to complete status switch operations;
(see Heider col. 17, lines 63-65: console memory, storage console operational function information)
- b) a unit forbidding to W/R all the RAMs in the computing system, to ensure that the only programs stored in the stated memory can be executed in the switching process. (see Heider col. 13, lines 48-49: switch operation performed; col. 17, lines 13-16; col. 16, lines 44-48: switching operations performed by software, programs; col. 6, lines 29-40: console (i.e. CPU) program, in console memory (i.e. ROM), not in main memory (i.e. not all RAMs, read and write operations))

Regarding Claim 8, Heider discloses a method to realize secured switch of computing system status, which includes:

- a) to receive the requests to switch the computing system from the present status to the previous one; (see Heider col. 13, lines 48-49; col. 16, lines 15-17: switch state request (i.e. command))
- b) to respond to the requests and execute a status switch control program that is absolutely uninterruptible with guarantee; (see Heider col. 14, lines 15-17: NMI capability)
- c) to switch the computing system from the present status to the stored previous one in order to change or resume all the alterable status information of the computing system. (see Heider col. 15, lines 64-67: state switched, state saved)

Regarding Claim 9, Heider discloses as to the method stated in claim of Rights 8, the step b) further includes: to ensure that the switch can be executed only after ID verification. (see Heider col. 14, lines 26-34: authorization and authentication performed (i.e. ID verification))

Regarding Claim 10, Heider discloses as to the methods stated in claim of Rights 7 or 8, the step b) includes:

- d) to set symbols to allow normal switches and simultaneously send out NMI; (see Heider col. 17, lines 54-57; col. 17, line 63 - col. 18, line 4: symbols (i.e. character strings) to initiate state switch; col. 14, lines 15-17: NMI operation)

e) to reset the stated symbols after switching in case of being misused by any other programs. (see Heider col. 14, lines 35-38: authorization fails, reset saved state (i.e. ON state, console state))

Regarding Claim 11, Heider discloses as to the method stated in claim of Rights 9, the step b) further includes: to ensure that the stated non-maskable program is absolutely uninterruptible before finishing the stated reset. (see Heider col. 14, lines 15-17: non-maskable interrupt (i.e. NMI) utilized in processing reset)

Regarding Claim 12, Heider discloses as to any one of the methods stated in claim of Rights 7-8, the step b) includes: to ensure that the responses to status switch requests can be executed only by the prearranged control programs. Otherwise, no switch is allowed. (see Heider col. 16, lines 44-48; col. 17, lines 13-16: only software, program perform requests (i.e. commands) within console memory, applications in main memory cannot process console commands)

Regarding Claim 13, Heider discloses as to any one of the methods stated in claim of Rights 7-8, the step b) includes: to forbid to read or write all the RAMs in the computing system, and ensure that the only programs stored in the stated memory can be processed in the switching process. (see Heider col. 13, lines 48-49: switch operation performed; col. 17, lines 13-16; col. 16, lines 44-48: switching operations performed by


software, programs; col. 6, lines 29-40: console (i.e. CPU) program, in console memory (i.e. ROM), not in main memory (i.e. not all RAMs read and write operations)

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlton Johnson whose telephone number is 571-270-1032. The examiner can normally be reached Monday through Friday from 8:00AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nassar Moazzami, can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Carlton Johnson
January 5, 2007

NASSER MOAZZAMI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100


1/7/07